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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

	Application No.	Applicant(s)	
	09/818,052	REYNOLDS ET AL.	
Office Action Summary	Examiner	Art Unit	
	Christopher M. Lambrecht	2623	
The MAILING DATE of this communication app Period for Reply		orrespondence address	
A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING DA - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period w - Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICATION 36(a). In no event, however, may a reply be tim vill apply and will expire SIX (6) MONTHS from , cause the application to become ABANDONEI	lely filed the mailing date of this communication. D (35 U.S.C. § 133).	
Status			
Responsive to communication(s) filed on 19 Oct This action is FINAL. 2b) ☑ This Since this application is in condition for allowar closed in accordance with the practice under E	action is non-final. nce except for formal matters, pro		
Disposition of Claims			
4) ☐ Claim(s) 1-56 is/are pending in the application. 4a) Of the above claim(s) is/are withdraw 5) ☐ Claim(s) is/are allowed. 6) ☐ Claim(s) 1-56 is/are rejected. 7) ☐ Claim(s) is/are objected to. 8) ☐ Claim(s) are subject to restriction and/or	vn from consideration.		
Application Papers			
9) The specification is objected to by the Examine 10) The drawing(s) filed on is/are: a) access Applicant may not request that any objection to the Replacement drawing sheet(s) including the correction 11) The oath or declaration is objected to by the Examine	epted or b) objected to by the Eddrawing(s) be held in abeyance. See ion is required if the drawing(s) is obj	e 37 CFR 1.85(a). ected to. See 37 CFR 1.121(d).	
Priority under 35 U.S.C. § 119			
12) Acknowledgment is made of a claim for foreign a) All b) Some * c) None of: 1. Certified copies of the priority documents 2. Certified copies of the priority documents 3. Copies of the certified copies of the prior application from the International Bureau * See the attached detailed Office action for a list	s have been received. s have been received in Application rity documents have been receive u (PCT Rule 17.2(a)).	on No ed in this National Stage	
Attachment(s) 1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date	4) Interview Summary Paper No(s)/Mail Da 5) Notice of Informal P 6) Other:	nte	

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see pages 1-2, filed October 19, 2006, with respect to the rejection(s) of claim(s) 1-56 under 35 U.S.C. §§ 102(e) and 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of U.S. Patent No. 5,937,331 to Kalluri et al.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent, or . . .
- (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
- 3. Claims 1-4, 8, 13-19, 22, 23, 25, 27-33, 36-51, and 53-55 are rejected under 35 U.S.C. 102(a), (e) as being anticipated by U.S. Patent No. 5,937,331 ("Kalluri").

Regarding claim 1, Kalluri discloses a data modification device comprising:

a data modification unit (broadcast station 50) coupled to an incoming data terminal (satellite downlink 52), a local data terminal (interactive program source

58), and a data distribution terminal (satellite uplink 62) (fig.1, col.5 ll.7–17), wherein the data modification unit is adapted to selectively combine data from the incoming data terminal (television signal) and the local data terminal (interactive program) in accordance with an instruction set (col.5 ll.43–62),

a data stripper (trigger extraction unit 56) for extracting a meta data parameter (trigger) from a data signal (combined television-trigger signal) wherein the extracted parameter is a unique processor component identification parameter (unit address field 210) (figs.2–6, col.5 ll.21–24, col.6 ll.18–20, 54–59);

an evaluator (interactive program source 58) for comparing the extracted parameter to one or more predetermined meta data parameter values (col.6 ll.54–59, col.8 ll.1–4, 24–28);

an inserter (AVI generation unit 60) for inserting one or more of the predetermined meta data parameter values into the data signal based on the evaluator comparison (col.8 ll.33–37, col.9 ll.40–66).

As to claim 2, Kalluri discloses the device of claim 1, wherein the data modification unit comprises: a processor (server) configured to execute the instruction set (col.8 ll.18-23).

As to claim 3, Kalluri discloses the device of claim 2, wherein the data stripper (56) is coupled to the incoming data terminal (52), the processor (server) is coupled to the local data terminal (storage), and the data insertion unit (60) is coupled to the data distribution terminal (62) (fig.1, col.8 ll.13–23).

As to claim 4, Kalluri discloses the device of claim 1, wherein the incoming data (52) terminal is adapted to receive a data signal from a broadcasting source (10) (col.4 ll.60–65, col.5 43–45).

As to claim 8, Kalluri discloses the device of claim 4, wherein the broadcasting source (10) is an NTSC format (col.6 ll.1–9).

As to claim 13, Kalluri discloses the device of claim 4, wherein the data signal comprises a video data component (television signal) and a meta data component (triggers) (col.5 ll.1–5, 18–30).

As to claim 14, Kalluri discloses the device of claim 1, wherein the local data terminal (58) is adapted to receive a data signal from a storage device (col.8 ll.17–22).

As to claim 15, Kalluri discloses the device of claim 14, wherein the storage device is a recordable disk (col.8 ll.17–22).

As to claim 16, Kalluri discloses the device of claim 14, wherein the storage device is a RAM (col.8 ll.28–33).

As to claim 17, Kalluri discloses the device of claim 14, wherein the storage device is a computer database (server including storage) (col.8 ll.28–33).

As to claim 18, Kalluri discloses the device of claim 1, wherein the data distribution terminal (62) is adapted to transmit a data signal to a distribution channel (col.4 ll.65–67, col.5 ll.59–62).

As to claim 19, Kalluri discloses the device of claim 2, wherein the data stripper (56) is adapted to separate an incoming signal into a video data component (television signal) and a meta data component (triggers) (col.5 ll.47–52, col.8 ll.1–4).

As to claim 22, Kalluri discloses the device of claim 1, further comprising a receiver (set-top box 502 and television set 504) adapted to display the combined data from the incoming data terminal and the local data terminal (fig.11, col.1 ll.15–27, col.12 ll.19–32).

As to claim 23, Kalluri discloses the device of claim 22, wherein the receiver is an NTSC enabled television (television set 502 receives decoded AVI signal, col.12 ll.23–25, which is encoded from NTSC source, col.6 ll.3–6).

As to claim 25, Kalluri discloses the device of claim 22, wherein the receiver is an MPEG2 enabled television (set-top box 504 receives and decodes AVI signal, col.12 ll.23–25, which is encoded according to MPEG2, col.9 ll.44–47).

As to claim 27, Kalluri discloses the device of claim 22, wherein the receiver is a DBS enabled television (set-top box 502 receives digital broadcast from satellite downlink 500, fig.11, col.12 ll.19–25).

Regarding claim 28, Kalluri discloses the claimed data modification system as applied to claim 13, above.

As to claim 29, Kalluri discloses the data modification system of claim 28, wherein the data modification unit comprises: a data distribution terminal; and a processor coupled to the local data terminal (see Kalluri as applied to claim 3, above).

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As to claim 30, Kalluri discloses the data modification system of claim 29, wherein the processor is adapted to execute an instruction set (see Kalluri as applied to claim 1, above).

Regarding claim 31, Kalluri discloses a method of selectively modifying a data signal, comprising:

receiving a data signal (col.5 ll.43–47), the data signal comprising a first data component (television signal) and a second data component (interactive data) (col.5 ll.18–30);

separating the first data component from the second data component (col.5 ll.43-52, col.8 ll.1-4);

extracting a meta data parameter (trigger) from the data signal (col.5 ll.45–47) wherein the extracted parameter is a unique processor component identification parameter (unit address field 210) (col.6 ll.18–20, 54–59);

determining whether to modify the second data component by comparing the extracted parameter to one or more predetermined meta data parameter values (col.6 ll.40-49, 54-59, col.8 ll.23-27);

retrieving a third data component (interactive program) from a database (col.8 ll.27–36);

merging the third data component with the first data component based on the comparison (col.9 ll.40–66); and

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outputting the third data component and the first data component to a distribution terminal (col.9 l.66–col.10 l.4).

As to claim 32, Kalluri discloses the method of claim 31, wherein the first data component comprises a video component (television signal) and the second data component comprises a meta data component (interactive data) (col.5 ll.20–24).

As to claim 33, Kalluri discloses the method of claim 31, wherein determining whether to modify the second data component is a logic function programmed into a processor (server) (col.8 ll.12–28).

As to claim 36, Kalluri discloses the method of claim 31, wherein the third data component replaces the second data component (col.11 ll.37–51).

As to claim 37, Kalluri discloses the method of claim 31, where the third data component is a local meta data component (i.e., interactive program inserted at distribution point (50) other than broadcast source (10), fig.1, col.4 ll.56–65).

Regarding claim 38, Kalluri discloses the claimed method of selectively modifying a data signal, wherein there is a determination to modify the second data component, as applied to claim 31, above.

As to claim 39, Kalluri discloses the method of claim 38, wherein the first data component comprises a video data component, the second data component comprises a meta data component, and the third data component comprises a local meta data component (see Kalluri as applied to claims 32 and 37, above).

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As to claim 40, Kalluri discloses the method of claim 38, wherein the third data component replaces the second data component (see Kalluri as applied to claim 36, above).

Regarding claim 41, Kalluri discloses the claimed data modification system as applied to claims 2, 13, and 14, above.

Regarding claim 42, Kalluri discloses a data modification system comprising the claimed means as applied to the corresponding functional elements of claims 2, 13, and 14, above.

Regarding claim 43, Kalluri discloses a computer readable medium (server (58) local memory, col.8 ll.27–33) having computer-executable instructions (operations, col.8 ll.23–27, 52–54) for performing the claimed method as applied to claim 38, above.

Regarding claim 44, Kalluri discloses a method of controlling a display of enhanced (interactive) television content for viewers from a distribution point (broadcast station 50), comprising:

receiving a broadcast signal (col.5 ll.43-45) comprising a video component (television signal) and a generic meta data component (interactive data), the generic meta data component comprising triggers (col.5 ll.18-30);

extracting a meta data parameter (trigger) from the generic meta data component (col.5 ll.45–47) wherein the extracted parameter is a unique processor component identification parameter (unit address field 210) (col.6 ll.18–20, 54–59);

evaluating the generic meta data component to determine whether to make an insertion of local meta data (interactive program) into the broadcast signal by comparing the extracted parameter to one or more predetermined meta data parameter values (col.6 ll.40–49, 54–59, col.8 ll.23–27);

inserting the local meta data into the broadcast signal in response to a determination in the evaluating step to make the insertion (col.8 ll.23–37), to obtain a modified broadcast signal (AVI signal) (col.9 ll.53–66); and

broadcasting the modified broadcast signal to the viewers (col.10 ll.1–4, col.4 ll.65–67).

As to claim 45, Kalluri discloses the method of claim 44 wherein the local meta data (interactive program) comprises triggers (signal modules) (see U.S. Patent No. 5,448,568, col.10 l.53-col.65, incorporated by reference in Kalluri (col.10 ll.27-32).

As to claim 46, Kalluri discloses the method of claim 44 wherein: the generic meta data (interactive television content provided by originator, col.1 ll.57–63) further comprises content (represented as interactive programs, col.8 ll.13–23); and the local meta data comprises triggers (signal modules) and content (interactive program data) (see Kalluri as applied to claim 45, above).

As to claim 47, Kalluri discloses the method of claim 44 further comprising: repeating the evaluating step (col.8 ll.22–28), wherein the repeated evaluation step does not reach a determination to not make the insertion is not reached.

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As to claim 48, Kalluri discloses the method of claim 47 wherein the inserting step comprises: substituting the local meta data for the generic meta data in the broadcast signal in response to a determination in the evaluating step to make the insertion, to obtain the modified broadcast signal (col.11 ll.37–52).

As to claim 49, Kalluri discloses the method of claim 44 further comprising: stripping the generic meta data component from the broadcast signal prior to the evaluating step (col.5 ll.45–52).

As to claim 50, Kalluri disclose the method of claim 49 further comprising: repeating the evaluating step (col.8 ll.22–28), wherein the repeated evaluation step does not reach a determination to not make the insertion is not reached.

As to claim 51, Kalluri discloses the method of claim 44 further comprising: characterizing the distribution point (50) by a local parameter that includes an ID parameter (unit address of interactive program source 58) (col.6 ll.54–59); wherein the generic meta data component further comprises content (interactive program control information) and a plurality of announcements (program queue commands) (col.8 ll.28–37), each of which includes the ID parameter (col.6 ll.18–20, 54–59); and wherein the evaluating step comprises comparing values of the generic parameters and the local parameter (col.6 ll.40–49, 49–50, col.8 ll.24–28).

Regarding claim 53, Kalluri discloses a system for controlling a display of enhanced television content for viewers from a distribution point, the system comprising:

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a broadcast signal receiver (52) for receiving a broadcast signal comprising a video component and a generic meta data component (interactive data), the generic meta data component comprising triggers (fig.1, col.5 ll.18–30, 43–52, col.7 ll.47–53);

a data stripper (56) for extracting a meta data parameter (trigger) from the generic meta data component wherein the extracted parameter is a unique processor component identification parameter (unit address field 210) (col.6 ll.18–20, 54–59);

a local meta data center (58) for storing local meta data of particular relevancy to the viewers (col.8 ll.12-23);

a first processor component (58) coupled to the broadcast signal receiver for evaluating the generic meta data component to determine whether to make an insertion of local meta data (interactive program) into the broadcast signal by comparing the extracted parameter to one or more predetermined meta data parameter values (col.6 ll.54–59, col.8 ll.1–4, 24–28);

a second processor component (58) coupled to the local meta data center for selecting the local meta data in response to a signal from the first processor component to make the insertion based on the comparison (col.8 ll.28–37);

an inserter (60) coupled to the second processor component for receiving the local meta data, and further coupled to the broadcast signal receiver for inserting the local meta data into the broadcast signal to obtain a modified

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broadcast signal (col.9 ll.40–66); and a transmitter (62) coupled to the inserter for broadcasting the modified broadcast signal to the viewers (col.10 ll.1–4).

As to claim 54, Kalluri discloses the system of claim 53 wherein the broadcast signal receiver comprises a stripper (56) for removing the genetic meta data component from the broadcast signal and furnishing the generic meta data component to the first processor component (col.5 ll.44–52, col.11 ll.37–42).

Regarding claim 55, Kalluri discloses the system of claim 54 further comprising: a third processor component (data-to-VBI conversion unit 456) coupled to the stripper for selecting the generic meta data component in response to a signal from the first processor component to not make the insertion (fig.10, col.10, ll.60–65, col.11 ll.8–12); wherein the inserter comprises a component (VBI digital encoder 458) for receiving the generic meta data from the third processor component and inserting the generic meta data back into the broadcast signal (col.11 ll.12–19).

Claim Rejections - 35 USC § 103

- 4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 5-7, 9-12, 20, 21, 24, 26, 34, 35, and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kalluri.

Regarding claims 5-7, Kalluri discloses the device of claim 1, but fails to disclose that the incoming data terminal is adapted to receive a data signal that conforms to a TCP-IP standard, an ATVEF standard, and a DOCSIS standard. However, Official notice is taken of the fact that it is well known in the art to adapt a data terminal of a broadcast headend to receive a data signal conforming to a TCP-IP standard, for the purposes of enabling communication with TCP-IP devices; an ATVEF standard, for the purposes of enabling communication with enhanced television devices; and a DOCSIS standard, for the purposes of enabling communication with DOCSIS devices, respectively. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the incoming data terminal of Kalluri to receive a data signal that conforms to a TCP-IP standard, an ATVEF standard, and a DOCSIS standard, for the purpose of enabling communication with any well known standard such as TCP-IP devices, ATVEF devices, and DOCSIS devices in order to provide compatibility with any interactive television system.

As to claims 9-12, Kalluri discloses the device of claim 4, but fails to disclose the broadcasting source is an MPEG-2 format, an HDTV format, a DVD format, and a DBS format. Official notice is taken of the fact that it is well known in the art to employ a broadcasting source of an NTSC format, for the purpose of taking advantage of compression techniques to minimize transmission bandwidth; an HDTV format, for

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enabling communication with HDTV compatible devices; a DVD format, enabling communication with DVD compatible devices; and a DBS format, for enabling communication with DBS compatible devices. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the broadcasting source of Kalluri to include an MPEG-2 format, an HDTV format, a DVD format, and a DBS format, for the purpose conserving transmission bandwidth and enabling communication with HDTV, DVD, and DBS compatible devices in an interactive television system.

As to claims 20, 21, 34 and 35, Kalluri discloses the device of claim 2 and method of claim 33, but fails to disclose the processor is a reprogrammable device or an ASIC. Official notice is taken of the fact that it is well known in the art to implement a processor as a reprogrammable device, for the purpose of increasing system flexibility; and to implement a processor as an ASIC, for the purpose of improving device efficiency by using a processor designed for a specific application. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the processor of Kalluri as a reprogrammable device, for the purpose of increasing system flexibility; and to implement a processor as an ASIC, for the purpose of improving device efficiency by using a processor designed for a specific application in the cable headend.

As to claims 24 and 26, Kalluri discloses the device of claim 22, but fails to disclose the receiver is an HDTV enabled television and a DVD enabled television.

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Official notice is taken of the fact that it is well known in the art to implement a receiver: as an HDTV enabled television, thus enabling high-definition content to be viewed by the user; and a DVD enabled television, thus enabling compatibility with programming provided in DVD format. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the receiver of Kalluri to include an HDTV enabled television and a DVD enabled television, for the benefit of enabling compatibility with programming provided in NTSC format, HDTV format, MPEG-2 format, DVD format, and DBS format.

Regarding claim 52, Kalluri discloses the method of claim 51 but fails to disclose wherein the generic parameters and the local parameter are defined by options established by an Advanced Television Enhancement Forum specification. Official notice is taken of the fact that it is well known in the art to define enhanced television content according to an ATVEF specification, for the benefit of ensuring compatibility with ATVEF devices. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Kalluri to include the generic parameters and the local parameters are defined by options established by an Advanced Television Enhancement Forum specification, for the benefit of ensuring compatibility with ATVEF devices.

6. Claim 56 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kalluri in view of U.S. Patent No. 6,400,407 ("Zigmond").

Regarding claim 56, Kalluri discloses a system for controlling a display of enhanced television content for a first group of viewers comprising the claimed first distribution point as applied to claim 55, above. Kalluri further discloses that the first modified broadcast signal may be transmitted to a subsequent distribution link (col.4 ll.65–67). Kalluri does not disclose the subsequent distribution link includes a second distribution point as claimed.

In an analogous art, Zigmond discloses an enhanced television broadcast system (col.3 ll.46-65) comprising first and second distribution points (e.g., broadcaster affiliate and cable provider), wherein each distribution point: receives a broadcast signal including a video and generic (upstream) metadata, determines whether to insert local metadata, inserts the local metadata into the broadcast signal based on the determination, and transmits the modified broadcast signal to a subsequent distribution point (col.8 ll.37–63), thus allowing each distribution point to provide supplemental content that specifically enhances the current programming reaching its viewers (col.3 ll.46–65).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the subsequent distribution link of Kalluri to include the claimed second distribution point, as taught by Zigmond, for the benefit of enabling further content enhancement specific to viewers on the subsequent distribution link.

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Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See: U.S. Patent Nos. 7,103,904 (cols.7-10); 7,069,571 (cols.14-15); 7,028,327 (fig.3); 7,028,071 (col.9); 6,799,326 (cols.12-13); 6,560,777 (abstract); 6,530,084 (cols.5-6); 5,889,950 (col.6).

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8. The following are suggested formats for either a Certificate of Mailing or Certificate of Transmission under 37 CFR 1.8(a). The certification may be included with all correspondence concerning this application or proceeding to establish a date of mailing or transmission under 37 CFR 1.8(a). Proper use of this procedure will result in such communication being considered as timely if the established date is within the required period for reply. The Certificate should be signed by the individual actually depositing or transmitting the correspondence or by an individual who, upon information and belief, expects the correspondence to be mailed or transmitted in the normal course of business by another no later than the date indicated.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Lambrecht whose telephone number is (571) 272-7297. The examiner can normally be reached on Mon-Fri, 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Christopher M. Lambrecht

Examiner

Art Unit 2623

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